

QZ
200
N54c
1949

New York (State) Bureau of Cancer
Control

Cancer Control. Program plan.

QZ 200 N54c 1949

13010150R



NLM 05090694 7

NATIONAL LIBRARY OF MEDICINE

DUE TWO WEEKS FROM LAST DATE

7 JUL 19 1955

program plan

Cancer Control




Bureau of Cancer Control

New York State Department of Health

Medical Society of the State of New York

New York State Division • American Cancer Society

Published by
OFFICE OF PUBLIC HEALTH EDUCATION
New York State Department of Health
HERMAN E. HILLEBOE, M.D.
Commissioner

 **program plan**

Cancer Control

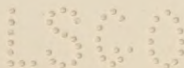
New York (State)
1.1

Bureau of Cancer Control

New York State Department of Health

Medical Society of the State of New York

New York State Division • American Cancer Society



introduction

QZ

200

N 54 c 55

1949

c.1

A cancer program may be defined as any planned action by a community agency with respect to the human problems created by cancer. The principles on which such action is based are the same, whether the agency be private and voluntary, or public and governmental.

The first step in carrying out specific activities in cancer control is to bring together all the community agencies concerned and to plan a program in which each contributes its proper share.

It is these principles which prompted the Medical Society of the State of New York, the New York State Division of the American Cancer Society, and the Bureau of Cancer Control of the New York State Health Department to undertake and formulate the following cancer control Program Plan.

This Program Plan was developed with the full understanding that, although it was developed on the state level, its effective execution rests upon the local medical society, cancer society and health department. It is these groups who are called upon to make cancer control programs part and parcel of the well-developed general public health program in their individual communities.

In the coordination of effort of all agencies, and in the tireless execution of this plan by the workers in the field, rests a large part of the solution to the problem of cancer control in this State.

626 Jan '51

contents

- I.** Need for Extended, Intensive Program 4
 - A. Problem 4
 - B. Needs for Expanded Program 8
- II.** Objectives to be Achieved 10
 - A. Prevention 10
 - B. Medical Services 11
 - C. Rehabilitation 16
 - D. Removal of Social and Economic Barriers 16
- III.** Functions and Techniques Used to Gain Objectives 16
 - A. Analysis of the Cancer Problem 16
 - B. Personnel Training and Recruitment 17
 - C. Provision for Physical Facilities 21
 - D. Demonstration and Consultation 22
 - E. Financial Aid 25
 - F. Research 31
 - G. Health Education 33
 - H. Cooperation with Other Agencies and Groups 35
 - I. Continuous Evaluation of Program 36

a program for cancer control

I. NEED FOR EXTENDED, INTENSIVE PROGRAM

A. THE PROBLEM:

1. General Statement:

Cancer is a disease which will affect approximately 20 per cent of all persons in the State.* In 1948, 18,052 new cases of cancer were reported in upstate New York. At any one time, approximately 50,000 persons have this disease in various stages. Although it may occur at any age, its incidence increases with increasing age, so that the majority of cases are among adults.

Cancer is a chronic disease requiring an average of three years to run its course. Treated patients should be kept under periodic medical observation throughout the remainder of their lives in order to detect and treat any recurrence or new form of the disease. It requires the highest forms of medical skill for diagnosis, treatment and aftercare. Hence, the complete cost of treating a case is among the highest in the field of medicine.

* M. L. Levin and H. Goldstein, "Cancer incidence, mortality, and expectancy in upstate New York." Paper given at Fourth International Cancer Research Congress, St. Louis, Mo., September 2-7, 1947. (See accompanying table)

[PROBABILITY OF DEVELOPING CANCER FROM BIRTH ON
BY SEX AND SITE
BASED ON CANCER MORBIDITY REPORTS
New York State, Exclusive of New York City, 1942-44

MALE		FEMALE	
Site	Proba- bility (in Per Cent)	Site	Proba- bility (in Per Cent)
Skin.....	2.459	Breast.....	4.974
Stomach.....	2.277	Cervix.....	2.196
Prostate.....	2.224	Intestine.....	2.167
Intestine.....	1.619	Skin.....	1.786
Lung and Bronchus.....	1.095	Stomach.....	1.736
Rectum.....	1.081	Fundus Uteri.....	1.366
Bladder.....	0.966	Ovary.....	0.916
Lip.....	0.567	Rectum.....	0.897
Pancreas.....	0.473	Liver.....	0.550
Leukemia.....	0.473	Bladder.....	0.493
Esophagus.....	0.403	Leukemia.....	0.425
Liver.....	0.394	Pancreas.....	0.419
Larynx.....	0.302	Biliary Passages.....	0.336
Brain.....	0.290	Lung and Bronchus.....	0.276
Kidney.....	0.255	Brain.....	0.216
Tongue.....	0.207	Kidney.....	0.195
Hodgkin's Disease.....	0.173	Bones and Joints.....	0.140
Mouth.....	0.170	Esophagus.....	0.139
Pharynx.....	0.170	Hodgkin's Disease.....	0.114
Bones and Joints.....	0.143	Mouth.....	0.061
Biliary Passages.....	0.126	Tongue.....	0.053
Testes.....	0.125	Pharynx.....	0.048
Breast.....	0.058	Lip.....	0.041
		Larynx.....	0.039
All Others.....	2.237	All Others.....	2.636
All Sites.....	18.287	All Sites.....	22.219
Sexual Sites.....	2.534	Sexual Sites.....	9.761

The most important single characteristic of cancer is that during its early course, when it is most curable, it is least apt to affect the general health or to cause symptoms sufficiently severe to alarm the patient and impel him to seek medical care. During the early or curable stage of cancer the natural spurs of disability and pain which lead to action are absent and must be replaced by incentives produced by education, publicity and demonstration.

2. Cause, Treatment, Effectiveness and Curability:

a. Cause: The essential cause of cancer is unknown. While no single common cause of cancer has been found, a number of different carcinogenic agents are known in experimental animals and in special cases among humans. Among these are: chemical agents, physical agents, biological agents such as hormones, and various forms of chronic irritation. In human beings various diseases, not in themselves cancerous, are known to increase the risk of the later development of cancer. In spite of the many different causes of cancer already uncovered, chiefly by experiments with animals, in most human cases it is not possible to identify any one of these.

b. Treatment: Most forms and most cases of cancer are curable with existing methods, during the early stage of their course. The chief problem is to discover and to treat the disease during this early stage. Treatment is directed toward the complete destruction of the cancer cells. This may be accomplished:

- (1) by complete surgical removal
- (2) by the destructive action on cancer cells of X-rays, radium rays, or related forms of radiation
- (3) by other agents which exert a destructive effect on cancer cells, such as, various chemicals or hormones. The effect of this group of remedies is, at the present time, not settled; they are useful chiefly as additions to treatment by surgery and X-ray.

c. Effectiveness: The effectiveness of treatment depends on the following factors:

- (1) The nature of the cancer, i.e., the type of cells of which it is made. Tumors comprised of rapidly growing cells have a lower cure-rate than those made up of more

slow-growing cells which are more like those of adult normal tissues.

- (2) The part of the body where the cancer occurs. This may determine how soon the cancer will cause symptoms, how difficult it is to diagnose, how easy it is to treat, and how much hazard is involved in removing or destroying it.
- (3) How far the cancer has progressed or metastasized at the time of treatment.
- (4) The adequacy of the treatment, including care before and after the actual surgical or radiological attack on the cancer itself.

d. Curability: Early cancer is curable—by early cancer is meant early in stage, or cancer which is still in the organ or site where it originated and has not metastasized. Since the spread of cancer usually takes time, in general, the earlier in time after the cancer has started, the earlier in stage. However, it must be remembered that, since cancer, even of the same part of the body, varies in its rate of growth, the same time period after onset of symptoms may permit one cancer to advance to a late stage although a slow-growing cancer would not. This is why some patients may have early cancer although they waited several months before seeking medical care while others may have late cancer even though they delayed much less. However, other factors being equal, the less delay the earlier the cancer. The fact that cancer may already be late when symptoms first appear, points to the need for methods of detecting cancer before symptoms appear.

Statistics on curability—in general, if all cases were treated “early,” the present survival rates would be doubled. This would mean that over 5,000 lives would be saved each year in upstate New York alone.

- (1) Five-year survivals (upstate New York data) : 26%
- (2) Results if all cases were early (upstate New York data) : 50%*

3. The Barriers to More Effective Application of Existing Knowledge Are:

- (1) Lack of knowledge on part of the public

* Based on study of all cancer cases reported, 6 upstate counties, 1940-44.

- (2) Fear and emotional attitude on the part of the public
- (3) Expense and time of diagnostic and treatment procedures
- (4) Large per cent of "negative" results if all persons with suspicious symptoms are thoroughly examined
- (5) Delay on part of patient in seeking medical care
- (6) Delay in making diagnosis, after patient seeks medical care
- (7) Lack of complete diagnostic and treatment facilities in some areas of the State.

B. NEEDS FOR EXPANDED PROGRAM:

1. Summary of the Existing Program:

a. Bureau of Cancer Control:

- (1) Public education in cooperation with Cancer Committee of the Medical Society of the State of New York and the Cancer Committees of the County Medical Societies—pamphlets, movies, lectures, radio programs and exhibits. An honorarium of ten dollars is available from the New York State Department of Health to a physician addressing a lay group on cancer.
- (2) Professional education—broad continued program in cooperation with the Medical Society of the State of New York, Committee on Post-graduate Education and Public Health—meetings, fellowships, teaching days—literature, such as Cancer Teaching Day volumes, Cancer Bulletin, films and exhibits. Dental Teaching Days are sponsored by the Cancer Committee of the Dental Society of the State of New York in cooperation with the District Dental Societies, the Bureau of Dental Health and the Bureau of Cancer Control in the New York State Department of Health. New York State Nurses Association and League of Nursing Education are influential in planning and implementing plans for education to reach all nurses.
- (3) Tumor clinics—financial aid for clinicians, nurses, part-time clerical aid and payment for follow-up visits. An honorarium is paid to a consultant to those tumor clinics which wish to avail themselves of this service.

- (4) Detection centers—financial aid for clinicians, specialists, nurses and part-time clerical aid.
- (5) Free pathological diagnostic service by the Division of Laboratories and Research, New York State Department of Health.
- (6) Research—statistical, clinical.
- (7) Nursing services—Consulting Nurse in the Bureau.
- (8) Reporting—upstate physicians, hospitals, tumor clinics and laboratories to the District Health Officer and full-time County or City Health Officers.
- (9) Loan of radium to tumor clinics.

b. Roswell Park Memorial Institute—diagnosis, research and treatment:

- (1) Diagnosis, consultation and treatment.
- (2) Research—basic, clinical, statistical.
- (3) Education:
 - Public*—by staff members.
 - Professional*—medical students, dental students, public health nurses, hospital nurses, residents, physicians and dentists.

2. Agencies Concerned in Existing Program:

- a.* New York State Department of Health
- b.* Medical Society of the State of New York
- c.* American Cancer Society—New York State Division and county branches
- d.* County Medical Societies
- e.* Tumor Clinic Association of the State of New York
- f.* State and District Dental Societies
- g.* City and County Health Departments
- h.* Tuberculosis and Health Associations (in a few counties)

3. Need for Public Health Program:

a. An organized community program is needed to overcome the barriers of ignorance, the financial barriers to early diagnosis and treatment, the lack of proper facilities for adequate diagnosis and treatment in many areas, and to accelerate the utilization of detection methods.

b. Further expansion is necessary to stimulate and aid public and professional education, tumor clinics, detection centers, to provide more adequate and free pathological and diagnostic services, to provide home nursing and follow-up care, to aid public health personnel in education and case-finding, to carry on research, and to provide financial assistance for diagnosis and treatment to the medically indigent cases (so-called borderline group).

c. Closer integration and coordination of activities of the Medical Society of the State of New York, Dental Society of the State of New York, New York State Division of the American Cancer Society, New York State Department of Health, and of the corresponding groups at the local levels is needed.

II. OBJECTIVES TO BE ACHIEVED

A. PREVENTION:

1. Prevention of Exposure to Known Causes of Cancer:

a. Industrial: Since the full extent of the industrial or occupational hazard is not known, research is needed to explore this phase of the cancer problem. This will involve close cooperation with the Industrial Hygiene Division of the Department of Labor and with the particular industries concerned. The industries where a hazard might exist must be identified, followed by inspection and instruction in elimination of the hazard. Undoubtedly, legislation will be required in the elimination of, or protection from the hazard. This would include any occupation involving exposure to:

- (1) *B-naphthylamine and benzidine:* Aniline dye industry—bladder cancer.
- (2) *Radiation from X-rays and radium:* Nurses, physicians, technicians, dentists, manufacture of electronic tubes and testing of metal castings and use of radium ionization eliminator—skin cancer, leukemia and bone sarcoma.
- (3) *Arsenic:* Skin cancer.
- (4) *Tar:* Skin cancer.
- (5) *Benzol:* Leukemia.
- (6) *Chromates:* Lung cancer.

- (7) *Ultraviolet radiation*: Farmers, outdoor workers, and sailors—skin cancer (excessive or year-round exposure).

b. Medicinal:

- (1) Arsenic—Fowler's Solution—continuous use.
- (2) Use of X-rays as depilatory by non-medical personnel—excessive dosage.
- (3) Prolonged use of estrogens may stimulate growth.

2. Treatment of Precancerous Conditions:

This should ideally involve examination of the entire population. The detection of precancerous lesions has two main implications: the prevention by removal of lesions and the identification of persons exposed to increased risks for future follow-up. The incidence of precancerous lesions is not known, nor is the precise extent of the cancerous risk known in many types of such lesions.

Three types of increased risk of developing cancer:

- a. *In lesion*—leukoplakia
- b. *In organ*—cystic mastitis
- c. *In individual*—syphilis (tongue; cervix, penis)—members of "cancer families"

3. Hereditary Prevention:

Advice to parents should be given when a definitely hereditary form of cancer or precancer has appeared such as: retinoblastoma, familial polyposis and xeroderma pigmentosum. Further research and identification of cancer families and necessary follow-up should be undertaken.

B. MEDICAL SERVICES:

1. Case-Finding:

Involves finding three types of cases:

- a. *Precancer*—persons with precancerous conditions
- b. *Asymptomatic*—persons with cancer not causing symptoms
- c. *Symptomatic*—persons with cancer symptoms

Case-finding of precancerous conditions and of asymptomatic cancer would involve examination of entire adult population. Since this is idealistic and not economically possible at the present time, emphasis should be placed on that age group where the incidence of cancer is greatest. The population of upstate New York, both sexes combined, over age forty is estimated to be about 2,700,000. If the detection rate is 0.2%, we should find 5,400 cases: if the detection rate is 0.4%, we should find 10,800 cases of cancer.

To examine 2,700,000 persons would require 225,000 clinic sessions (12 patients, 4 physicians per clinic session) or 900 clinics operating 5 days a week, 50 weeks per year: services of 18,000 physicians working once a week or 9,000 physicians working twice a week (all physicians in upstate New York). Therefore, *some screening measures must be found such as:*

- (1) Concentration on certain age groups
- (2) A single test to identify those who may have cancer
- (3) Concentration on certain forms of cancer (breast, skin, uterus, lung, rectum)
- (4) Concentration on groups known to have increased incidence of cancer. No group has increased risk to all cancer except members of known cancer families. The number of cancer families is unknown. If the percentage of cases of cancer in preceding generations exceeds 35%, family is probably a cancer family. However, age at death or last observation must be taken into consideration. Other groups with increased risk:
 - i. BREAST CANCER: Daughters of mother who had breast cancer, single women, nulliparae, and those with chronic cystic mastitis
 - ii. CERVIX UTERI: Married before age 20, syphilitics, and multiparae
 - iii. FUNDUS UTERI: Hemorrhagic menopause
 - iv. SKIN: Outdoor occupations, exposure to X-rays, arsenic, tar, pitch, etc.
 - v. STOMACH: Achlorhydria, pernicious anemia, and gastric polyp
 - vi. COLON: Polyp
 - vii. TONGUE: Syphilitics

2. Schedule of Case-Finding:

(Precancer and asymptomatic cancer) might be limited to the following sites:

- a. In males:** skin, mouth, lung, rectum, larynx
- b. In females:** skin, mouth, lung, rectum, breast, uterus.
If possible, X-ray of the stomach and intestines (both sexes) should be included.

Examination to consist of:

- a. History**
- b. Physical:**
 - (1) Skin, breast, oral cavity
 - (2) Chest X-ray
 - (3) Proctoscopic examination
 - (4) Pelvic examination, vaginal smear and/or sponge biopsy
- c. Laboratory:** Urinalysis, complete blood count, and serology

Detection centers might be established in every hospital having facilities for diagnostic X-ray examinations (150 hospitals in up-state New York). These should be under the sponsorship of the County Medical Society, New York State Division of the American Cancer Society (its local branches), the local health department, and the New York State Department of Health. If two sessions per week were held at each of the 150 hospitals, this would total 15,000 sessions or 180,000 examinations per year. However, if these sessions were held every day, a total of 540,000 examinations per year would result, which is 22 per cent of the population over 40. (See map of Detection Centers on page 14.)

3. Medical Care:

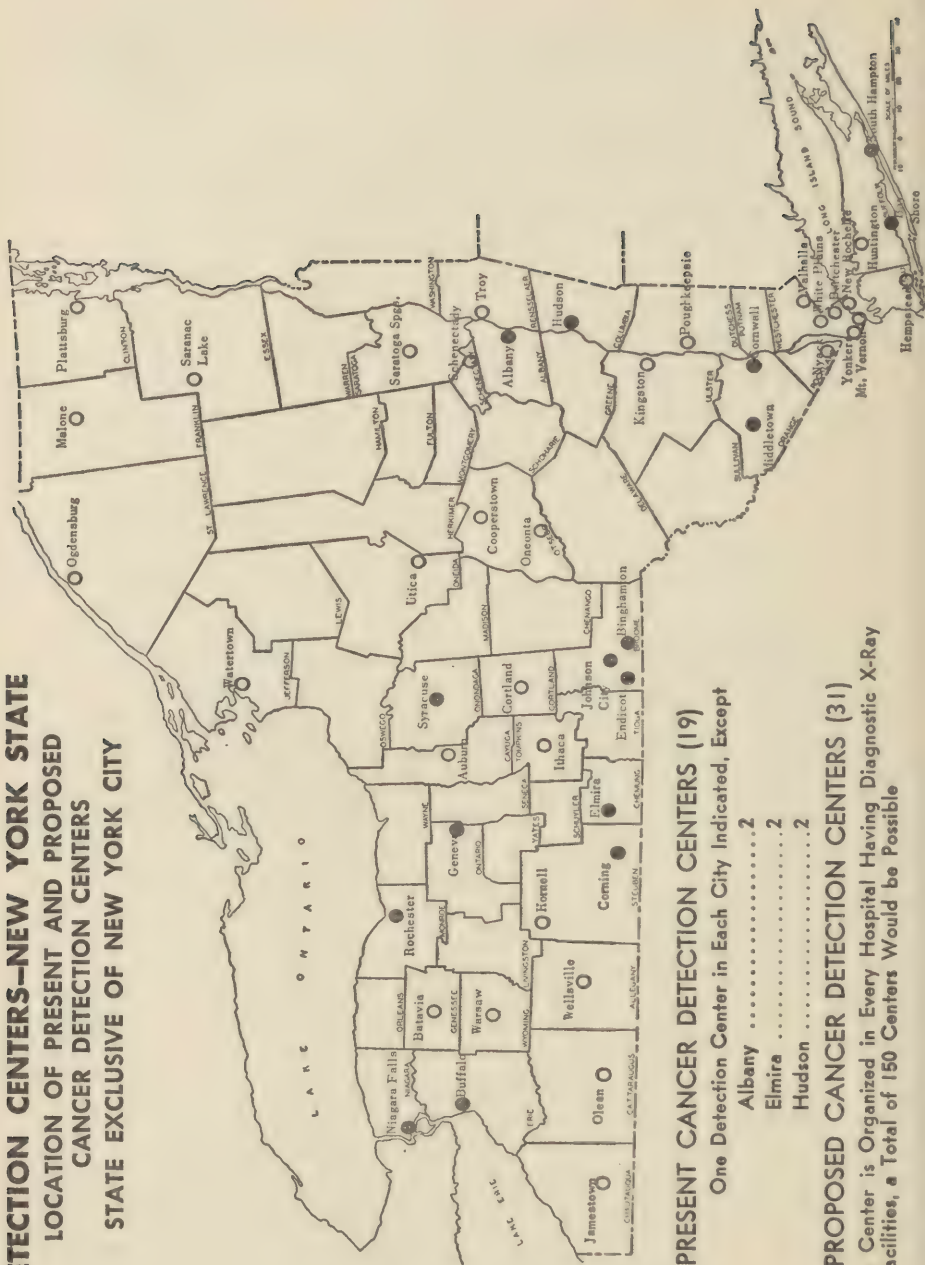
Medical care for cancer is closely linked with medical care in general because cancer may occur in any part of the body, and the early symptoms are also those which may indicate the presence of a great many other diseases. To insure the highest quality of medical care for cancer the following objectives must be reached:

- a.** Every person who develops signs and symptoms which may mean cancer should receive the full diagnostic

DETECTION CENTERS-NEW YORK STATE

LOCATION OF PRESENT AND PROPOSED CANCER DETECTION CENTERS

STATE EXCLUSIVE OF NEW YORK CITY



● PRESENT CANCER DETECTION CENTERS (19)

One Detection Center in Each City Indicated, Except

Albany 2

Elmira 2

Hudson 2

○ PROPOSED CANCER DETECTION CENTERS (31)

If a Center is Organized in Every Hospital Having Diagnostic X-Ray Facilities, a Total of 150 Centers Would be Possible

examinations necessary to settle conclusively whether or not they do mean cancer.

- b.** Every person diagnosed as having cancer should receive that type of treatment known to offer the greatest chance of producing a permanent cure.
- c.** Persons with advanced cancer should receive nursing and medical care which will offer the greatest comfort and freedom from pain during the period of life remaining to them.

Problem of medical care is primarily the responsibility of the practicing physician. Whatever is done to improve cancer care will improve medical care generally.

4. Nursing Services:

Nursing service for the cancer patient is closely linked with general nursing services. The generalized public health nurse should be responsible for all cancer nursing services to the family and individual in the home, and in those clinics under joint direction of other agencies and the health departments. To insure the highest quality of nursing service for the cancer patient the following objectives must be reached:

- a.** Stimulate case-finding.
- b.** Provide nursing care:
 - (1) Bed-side care and instructions to individual and family as depicted by needs.
 - (2) Supervision of patient and family for continuity of care.
 - (3) Assist in rehabilitation of patients.
- c.** Develop cancer nursing in relation to the whole health program.
 - (1) Plan staff educational programs.
 - (2) Annual evaluation of nursing services offered, and planning for additional services.
- d.** Interpretation to cooperating agencies and community of nursing services available by lay education and contacts with physicians, hospitals, detection centers and tumor clinics.
- e.** Coordination of nursing services by establishing working relationships and agreements with other local health agencies.

C. REHABILITATION:

The chief rehabilitation problems associated with cancer are those associated with amputation, extensive facial disfigurement, loss of voice (laryngectomy). No special facilities for rehabilitation of cancer, as such, are needed. Problem is same as that of medical and surgical rehabilitation for other diseases.

D. REMOVAL OF SOCIAL AND ECONOMIC BARRIERS:

Barriers in the way of greater application of existing knowledge are:

1. Shortage of physicians, especially well trained in the cancer field.
2. Shortage of nurses and social workers with cancer experience or full understanding of the cancer problem.
3. The traditional attitude of waiting for symptoms before seeking medical care.
4. Cost of X-ray and laboratory examination.
5. Widespread belief that cancer is incurable.

III. FUNCTIONS AND TECHNIQUES USED TO GAIN OBJECTIVES

A. ANALYSIS OF THE CANCER PROBLEM:

1. Available Statistical Data:

a. Mortality statistics indicate a beginning decline in age-standardized mortality among females, but not among males. Lung cancer is increasing more markedly than any other type.

b. Morbidity data are available in upstate New York since 1940 when cancer was made a reportable disease. Completeness of this reporting is approximately 75 per cent (60 per cent before death). Cancer registers are in existence in each district (except New York City) and in each full-time county and city health unit. More use of case registers should be made in follow-up, nursing service, and statistical analysis. The New York State Department of Health furnishes statistical data on morbidity pertaining to each county and city of 10,000 and over to each full-time city and county, district and regional health office.

c. To improve quality and quantity of data, measures must be instituted to secure more complete reporting from hospitals, laboratories and physicians.

- (1) Reports should be analyzed periodically to ascertain changes in delay intervals, to compare physicians' reports with Roswell Park Memorial Institute reports of the same cases, to compare the per cent of early cases from various geographic areas, and to compare the per cent breast cases (operative) with axillary nodes not involved, in various sections of the State.
- (2) Comparison of mortality records with previous case reports should be done systematically to measure accuracy of former. This involves a check of deaths from causes other than cancer against the central cancer case register.
- (3) To ascertain amount and type of undiscovered cancer, autopsies in general and special hospitals should be secured on representative samples of deaths, rather than "interesting cases" and diagnostic enigmas.
- (4) Assistance and guidance should be given hospitals, detection centers and tumor clinics in improving record and follow-up forms with the objective of adopting standard forms to make data more easily treated statistically.

2. Epidemiological Factors in Control:

a. Known epidemiological factors vary with each site of cancer. The greatest return for a given amount of money, time and personnel would accrue from intensive diagnostic procedures in persons with symptoms.

b. For case-finding in asymptomatic persons, practical considerations demand concentration of effort in groups known to have increased risk. Separate program of research with view of identifying such groups is needed.

c. The increased incidence with age is the most important single epidemiological factor now known.

B. PERSONNEL TRAINING AND RECRUITMENT:

1. Physicians, Nurses, Laboratory Technicians and Consultants:

To examine all adults aged 40 years and over (2,700,000 persons) once a year, there would be needed the following services:

a. Physicians—Twelve-minute examination per person (short examination) would require 500,000 physician-hours estimating a 7 hour day or 71,425 physician-days or full-time services of 286 physicians (250 working days per year). For a full one hour examination per person 1,430 full-time physicians' services would be required.

The physicians' services needed to examine adequately all persons with symptoms which may indicate the presence of cancer cannot be estimated until the incidence of these symptoms is known.

Roentgenologists required for fluoroscopic examination of esophagus and stomach, assuming that a roentgenologist will perform no more than 7 such examinations per day, would be 1,428 roentgenologists to examine 2,500,000 persons during a year on the basis of a 250 day working year.

b. Nurses—At the minimum of one nurse for each three examining physicians, there would be needed the full-time services of 476 nurses for detection examination alone.

c. Laboratory Technicians—For examination of all smears: (This method of diagnosis is still in the research stage.)

- (1) The cell smear method of examination consists of examination of secretions and fluids from various body organs. It has been demonstrated that if early cancer is present in such organs, such as the uterus, bladder, or lung, cancer cells may be detected in the secretions given off with a high percentage of accuracy. The great importance of this is that it makes early diagnosis possible without surgical removal of a piece of tissue.
- (2) Special training is needed before a pathologist can use this method. If it is used on a large scale, a technician must be available to screen out the obviously negative slides and enable the pathologist to confine his attention to slides which are doubtful or suspicious. Otherwise it would be unrealistic to expect a pathologist to spend most of his time examining a large number of slides, of which perhaps less than one per cent would show pathology. Hence, before this method can be used as a mass screening device, technicians will have to be trained for the

preliminary screening and pathologists for the final examination of cell smears.

- (3) The number of such technicians which may be needed cannot be estimated until the technique and possibilities of this method are more fully explored. All pathologists engaged in tissue diagnosis should receive training in the cell smear method.

d. Consultants in cancer diagnosis and treatment—At present cancer is not formally recognized as a medical specialty. However, it is recognized that special training in the diagnosis, radiation therapy and surgery of cancer requires at least three years of training after the second year of general internship.

- (1) This type of training is available in relatively few centers in this country, among those being the Memorial Hospital, New York City, and the Roswell Park Memorial Institute at Buffalo, New York.
- (2) It would be highly desirable to have at least one physician with such training in each large city of the State. The training facilities in New York City and in Buffalo should be used with this immediate goal in mind. This involves giving aid, in obtaining fellowships or residencies to physicians who intend to settle upstate. At present physicians from Buffalo, Rochester, Syracuse, and Albany are receiving such training.

2. Program of Training Courses and Continuation Studies for Professional Personnel:

For professional personnel outside of official staff (State or local health departments).

a. Physicians:

- (1) Fellowships of up to one year are available with stipend of \$300 per month, tuition \$100 per month, travel to and from place of training for physicians, pathologists, radiologists, etc., whose training will further community cancer programs.
- (2) One to two weeks' course in cancer to be developed for general practitioners; courses to be given in each of the four upstate medical schools.

b. Dentists: One or two weeks' course in oral cancer to be developed for practicing dentists.

c. Nurses:

- (1) Course similar to 3(a) below developed for all nurses.
- (2) Fellowships of four to six weeks are available to key nursing personnel for post-graduate training in cancer nursing.

d. Social Workers:

- (1) One or two weeks' orientation course to be developed for all social workers.
- (2) Fellowships of four to six weeks to be made available to key medical social workers for post-graduate training.

e. Teachers—High School and Colleges: Two weeks' cancer course, especially for biology and science teachers.

f. Technicians: A special program of training technicians in cell smear diagnosis is to be developed.

3. In-service Training:

a. For supervising nurses and staff nurses (District Health Office personnel and local health unit personnel) a training program consisting of a two-week period of intensive didactic and experience training at Roswell Park Memorial Institute has been under way for the past three years.

These courses are being continued on a long-range basis, and the program has been broadened to include key public health nurses from official and nonofficial agencies in the State, university instructors in nursing education, directors of tumor clinic nursing services and a limited number of out-of-state nursing consultants.

b. Similar courses for health officers and district health officers are being planned. In addition to those at Roswell Park Memorial Institute, the resources for training at Memorial Hospital, New York City, at Presbyterian Hospital, New York City, and at Strong Memorial Hospital, Rochester, should be utilized. The advisability of developing such courses has been presented to

each of these hospital centers; at present none are in a position to offer such courses on a scale commensurate with that needed before such courses may be offered to all health officers in the State. Memorial Hospital, New York City, Presbyterian Hospital, New York City and Roswell Park Memorial Institute, Buffalo can give short periods of observation and training to a few physicians at a time.

C. PROVISION FOR PHYSICAL FACILITIES:

The outstanding needs with regard to physical facilities for cancer control are:

1. Facilities for the care of advanced, terminal or chronically incapacitated cancer patients who cannot be adequately cared for at home. Chronic disease beds in general hospitals as wings or separate units of general hospitals, rather than separate chronic disease hospitals should be developed. A program for the care of such patients and of other chronically ill persons has been submitted to the Legislature by the Health Preparedness Commission.
2. Home care program should be developed in connection with medical centers, and general hospitals as has been done by Montefiore Hospital in New York City.
3. The possibility of loaning X-ray machines, both superficial and deep, to approved tumor clinics should be explored. Diagnostic X-ray machines may be needed for some detection centers.
4. Radium: Approximately \$35,000 has been expended for the purchase of 1970.56 milligrams of radium to be loaned to the various approved tumor clinics in the State. The Director and the physicist of the Roswell Park Memorial Institute will check the physical facilities, as well as the quality of the professional staff of any tumor clinic before radium is made available to them. After this program is more fully developed, the need for additional supplies of radium might become evident.

D. DEMONSTRATION AND CONSULTATION:

1. Demonstration:

Demonstration of results attainable by examination of all apparently well women aged thirty-five and over, with a goal of detecting all asymptomatic breast and uterine cancer. This should be a cooperative project of the local health department, county medical society, New York State Division of the American Cancer Society, the medical school located in the project area, the Medical Society of the State of New York and the New York State Department of Health. It should be possible to examine 40,000 women in twenty weeks.

a. Objectives of such a program:

- (1) *Long range objective:* To stimulate periodic re-examinations by local physicians. The demonstration would start the process of periodic examination. The Committee on Cancer of the Medical Society of the State of New York has endorsed the principle of cancer detection or case-finding as carried out in the present detection centers and has recommended active support of such centers by the medical profession.* A specific project as outlined in (b) below would be submitted to this Cancer Committee for their approval and endorsement.
- (2) An intensive educational program must precede and follow demonstrations of this kind to emphasize to the examinees the importance of periodic examination and re-examination.
- (3) Laboratory examination of vaginal smears and other cell smears could be continued as permanent service, under local auspices.

b. Breast and uterine cancer detection program:

- (1) A demonstration project involving complete case-finding of breast and uterine cancer in a selected area should be undertaken with the objective of examining all apparently healthy women aged thirty-five years.

* Report of the Sub-Committee on Cancer of the Council Committee on Public Health and Education of the Medical Society of the State of New York. Approved by the Council Committee on Public Health Education and approved by the Council of the Medical Society of the State of New York, November 13, 1947.

and over for breast and uterine cancer. A county or city of 250,000 population would be a good demonstration area. This again would be a cooperative project of the county medical society, New York State Division of the American Cancer Society, local health department, medical school and New York State Department of Health.

(2) *Personnel needed for above project:*

- 1 Director of Project—full-time physician furnished by New York State Department of Health
- 3 Cytologist—technicians
- 2 Pathologists
- 3 Nurses
- 12 Physicians—full-time or equivalent number of part-time physicians
- 3 Laboratory technicians
- 3 Secretaries
- 1 Statistician
- 3 Clerks

(3) *Content of examination:*

Physical examination
Breast and pelvic examination
Vaginal smear
Chest X-ray
Urinalysis
Complete blood count
Serology

(4) Precede by special course in techniques of breast and pelvic examination to local physicians participating in project.

(5) Schedule examination on seven-hour day, six-days-a-week basis:

- (a) Estimated examinations—twenty-eight per physician day
- (b) Clinics in three hospitals, four physicians each or equivalent— $12 \times 28 = 336$ examinations per day
 $= 1,996$ per week
- (c) In twenty weeks—40,000 examinations (120 days)

(d) Re-examination every six months in physicians' own offices	
(6) Budget for breast and uterine case-finding demonstrations:	
Physicians' services at \$30 per day—	
360x120 =	\$43,200
Nurses' services at \$10 per day—120x120 =	14,400
Cytologist services at \$50 per week (3) =	3,000
Pathologist services (part-time) at \$50 per week (2) =	2,000
Laboratory technicians (3) at \$50 per week	
150x20 =	3,000
Secretaries (3) at \$40 per week—120x20 =	2,400
Clerks (3) at \$30 per week—90x20 =	1,800
Statistician (1) at \$75 per week—75x20 =	1,500
Stationery, forms and office supplies	750
Equipment at \$1,200 per clinic	3,600
Total Cost:	\$75,650
Income from patients—50% of 40,000 at \$3 =	60,000
25% of 40,000 at \$5 =	50,000
25% free	
Total Estimated Income:	\$110,000

2. Consultation Services:

a. Medical consultation services for most of the forty-seven tumor clinics in the State would improve the quality of the clinical and teaching work of these clinics. Such services could be rendered by physicians with special training in the diagnosis and treatment of all types of cancer services or by specialists in separate phases of cancer, such as cancer of the breast, stomach, larynx, uterus, or skin. Consultation services to tumor clinics can be provided at present on a free-for-service basis at the rate of \$50 per clinic session attended. Physicians of consultant calibre to tumor clinics are available in New York City, Buffalo, Albany, Syracuse, and Rochester. With a few exceptions, tumor clinics have not, up to the present, been ready to accept such consultant services as may be available.

b. The proposed program is that of (a) encouraging physicians with special training in cancer to settle in the upstate centers

of population and (b) expanding the professional staff at the Roswell Park Memorial Institute sufficiently to permit staff members to spend part of their time as consultants to tumor clinics. Consultants in cancer probably could be induced more readily to settle in each of the four major cities provided they were offered teaching positions in the medical schools in these cities. This has now become feasible because of the availability of funds to the amount of \$25,000 per year for each medical school, by the United States Public Health Service, for organizing and maintaining cancer departments in such schools.

E. FINANCIAL AID:

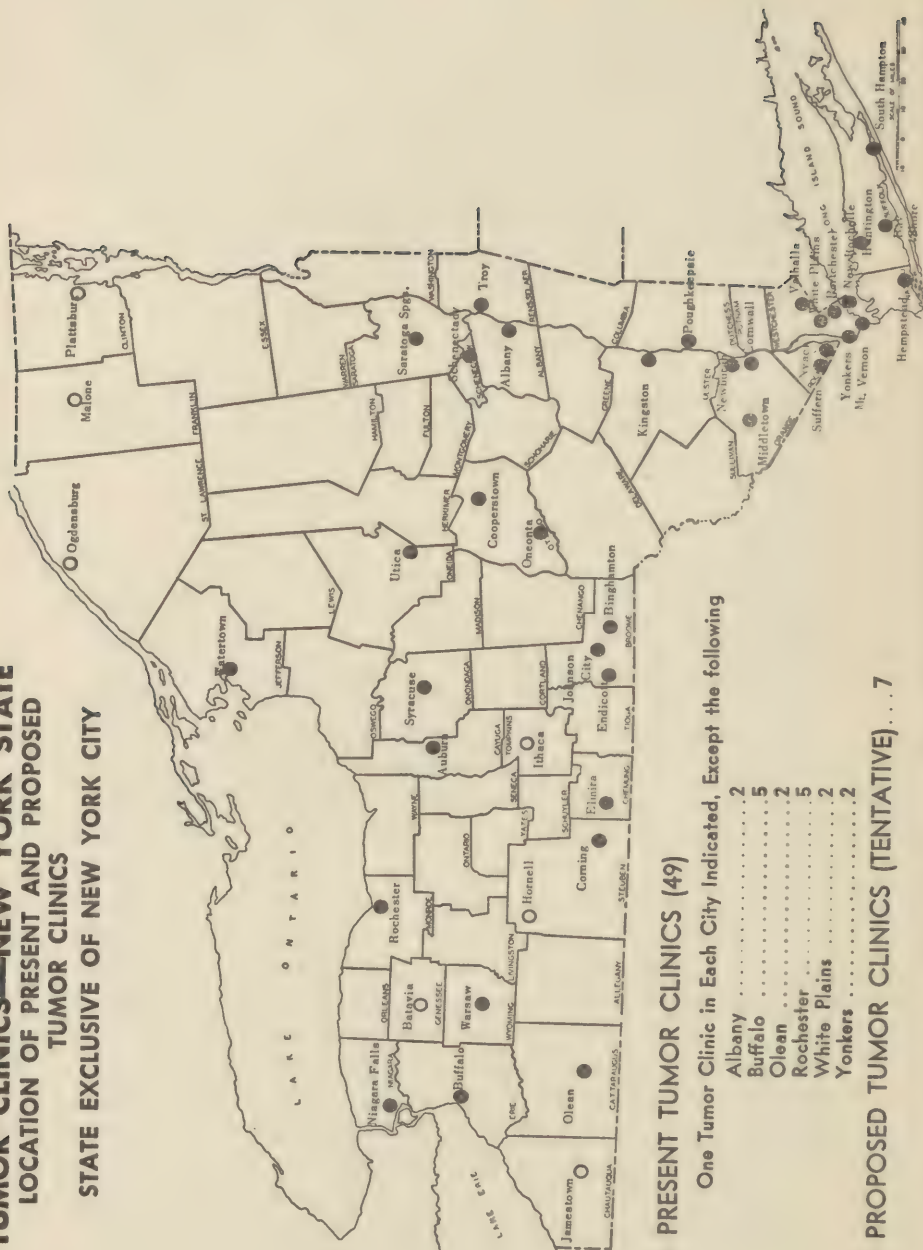
Financial aid is now available in the payment of services for tumor clinics, detection centers, physicians for public education, and physicians for professional education.

1. Tumor Clinics:

Following the recommendations made in 1939, by the New York State Legislative Survey Cancer Commission, a program of organization and aid to tumor clinics was undertaken by the Bureau of Cancer Control, in cooperation with and the full approval of the Cancer Committee of the Medical Society of the State of New York, and the County Medical Societies. Through this joint effort, the number of tumor clinics has since grown from twenty-nine to forty-seven. All but nine are approved or provisionally approved by the American College of Surgeons.

The map on page 26 gives the location of these clinics and indicates the tentatively proposed tumor clinics. Following the recommendation of the Sub-Committee on Cancer of the Council Committee on Public Health and Education of the Medical Society of the State of New York (November 13, 1947), the Bureau of Cancer Control has begun to review the existing tumor clinic situation in the State not only in regard to additional equipment and personnel but also to determine where additional tumor clinics might be established. Factors such as population density, trading area and geographic barriers will be considered in the location of any new clinics. The terms of the survey should be worked out as a joint endeavor of the Cancer Committee of the Medical Society of the State of New York, Tumor Clinic Association for the State of

**TUMOR CLINICS—NEW YORK STATE
LOCATION OF PRESENT AND PROPOSED
TUMOR CLINICS
STATE EXCLUSIVE OF NEW YORK CITY**



● PRESENT TUMOR CLINICS (49)

One Tumor Clinic in Each City Indicated, Except the following

Albany	2
Buffalo	5
Olean	2
Rochester	5
White Plains	2
Yonkers	2

O PROPOSED TUMOR CLINICS (TENTATIVE)...7

New York, New York State Division of the American Cancer Society, and the Bureau of Cancer Control of the New York State Department of Health.

Financial aid to tumor clinics consists of payment for the following services:

- a. *Clinical Assistant:*** Physicians designated by the Tumor Clinic Committee or Executive Officer to aid in working up cases and in the operation of the clinic may be reimbursed at the rate of \$15 per clinic session. At present eighteen clinics receive this type of financial aid. There are no professional qualifications which the designated physician must meet to qualify as a Clinical Assistant.
- b. *Consultants' Services:*** Services of a consultant to the clinic may be paid for at not to exceed \$50 per clinic session, plus travel expenses. A consultant is defined as a physician who has had three years' post-graduate training in a recognized cancer center, or who is a qualified specialist in any clinical branch related to cancer, such as radiology, pathology, surgery, dermatology, hematology, gastro-enterology, proctology, otolaryngology, gynecology.

Consultants called by the clinic cannot be regular members of the clinic staff or of the hospital in which the clinic is located.
- c. *Nursing Services:*** Nursing services may be paid to the tumor clinic at not to exceed \$1.00 per hour or \$5.00 per clinic session. Limit of subsidy: One nurse per tumor clinic session. At present four clinics receive this form of aid.
- d. *Clerical Aid:*** Part-time clerical services to the tumor clinic may be paid for at the rate of \$4 per day, not to exceed \$40 per month. At present fifteen clinics receive this form of aid.
- e. *Follow-up Service:*** In order to promote and encourage more adequate follow-up of cancer patients, payment for follow-up visits is made to the tumor clinics. Tumor clinics with an adequate follow-up system, which includes notification either by letter or telephone to lapsed patients or referral to a community agency for

follow-up visits, are paid at the rate of 50¢ per follow-up clinic visit. Limit of subsidy not to exceed \$160 per month for any one clinic. At present six clinics receive this form of aid.

2. Detection Centers:

In order to facilitate the organization of detection centers the following aid has been made available:

- a. For Physician Services.* Examining physicians in the detection center may be paid at a rate of \$15 per clinic session for physicians not of specialist grade, and \$25 per session for specialists. This aid has now been requested by fourteen detection centers.
- b. For Nurses' Services.* Nurses may be paid at not to exceed \$5 per clinic session. This aid has now been requested by nine detection centers.
- c. For Clerical Assistance.* Part-time clerical services may be paid at not to exceed \$4 per day or \$40 per month. This aid has now been requested by five detection centers.

3. Public Education: (Lecturers Fees)

Physicians may be reimbursed for delivering a lecture to a lay audience at \$10 per lecture. A report on the lecture must be made, giving the time, place, type of audience and number of persons in the group. The purpose of this aid is to stimulate physicians to engage in public education and to reimburse them in part for time spent in this work.

4. Financial Aid for Professional Education:

Cancer Teaching Days (Medical and Dental) are programs usually occupying an afternoon and evening of lectures and demonstrations by invited authorities on various aspects of cancer diagnosis, treatment and research. They are organized cooperatively by the Medical Society of the State of New York, New York State Dental Society, county medical societies, and the New York State Department of Health. Local and district health officers promote these Cancer Teaching Days and participate in the arrangements.

The Bureau of Cancer Control, in addition to its assistance in organizing these Teaching Days, furnishes the honoraria paid to

the speakers, and mimeographs and mails programs and invitations to the physicians of the several counties selected to be covered by the meeting. Honoraria are paid at the rate of \$50 per day.

The Bureau periodically has published and made available to all upstate physicians Cancer Teaching Day Volumes which comprise papers presented at various Cancer Teaching Days. It is planned to continue this procedure. A similar volume should be published and made available to all practicing dentists.

5. Acceptance of Financial Aid by Local Groups and Clinics:

a. Aid to Tumor Clinics: Acceptance has been moderate; this may be due in part to failure on our part to urge this acceptance. Clinics have been notified from time to time of the aid available but no effort has been made to "promote" acceptance.

b. Aid to Detection Centers: Acceptance obviously is contingent upon the organization of such centers. This aid will be used probably by all detection centers that are organized. At present fifteen centers are receiving aid.

c. Aid for Cancer Teaching Days: This type of aid has been accepted and used fully by the agencies concerned. However, it has been evident that the promotion of Cancer Teaching Days has developed largely upon efforts of the Bureau of Cancer Control (approximately 40 Cancer Teaching Days have been held in the past seven years) and the Committee on Post-graduate Education of the Medical Society of the State of New York.

d. Aid for Lectures to Public: Since this aid has been available, the number of lectures to the public by local physicians has increased by over fifty per cent. The provision of financial aid has been but one of the factors responsible.

e. Aid for Consultants' Services: This aid has not been extensively used, chiefly because there are few consultants available.

6. Plans for Increased Use of Financial Aid:

a. Each tumor clinic to be visited and all types of aid available discussed with the clinic staff.

b. District and local health officers to participate more actively in this program.

c. Promotion and arrangements for Cancer Teaching Days to be handled through district and local health officers.

d. Organization of detection centers to be stimulated in co-operation with Cancer Committee of the Medical Society of the State of New York and the Cancer Committees of the County Medical Societies.

7. Requirements for Receiving Financial Aid:

a. **Tumor Clinics:** The clinic should be approved by the county medical society, and the organization and staff must meet standards of the American College of Surgeons or equivalent.

b. **Detection Centers:** The center should be approved by the county medical society and the standards of the staff, organization, intake policy and content of examination must meet minimum standards which are being formulated by the Department and the Cancer Committee of the Medical Society of the State of New York. Minimum records will be required to permit evaluation of results.

c. **Consultants:** Consultants must be qualified as specialists on the Department's roster of specialists, or they must be graduates of a post-graduate training period of at least three years in a recognized cancer training center recognized as such by the National Cancer Institute for its training fellowships.

d. **Reimbursement for Lectures to Lay Groups:** A report of the lecture must accompany the voucher. The physician giving the lecture must be approved by the Cancer Committee or Comitia Minora of the County Medical Society.

8. Evaluation of Funds Spent for Services:

It is planned to prepare a summary of such expenditures each year for consideration in connection with expenditures for similar purposes by other agencies, including the American Cancer Society, New York State Division; Westchester Cancer Committee; Nassau Cancer Committee; Suffolk Cancer Committee; County Departments of Health; and City Departments of Health. These expenditures will be considered with a view toward determining:

a. Whether the amount spent is commensurate with the need.

- b.** Where expenditures should be increased and where decreased.
- c.** Whether resources of voluntary agencies are being used for purposes which can be achieved by funds from the official agencies, while neglecting financial needs which the latter are unable to meet.

Such an annual review could be conducted by an Advisory Committee as suggested in the last item of the Program Plan: I. Continuous Evaluation of Program.

In preparation of such evaluation, the Office of Business Administration will be requested to prepare an itemized analysis of expenditures in each category during the preceding fiscal year; non-official agencies and other official agencies will be requested to prepare similar financial statements.

F. RESEARCH:

1. Research in Progress:

- a.** Biophysics research (Roswell Park Memorial Institute)
- b.** Research in animal genetics and biochemistry of tumors (Roswell Park Memorial Institute)
- c.** Research in immunological problems related to tumors (Division of Laboratories and Research)
- d.** Research in clinical aspects of cancer (Roswell Park Memorial Institute)
- e.** Statistical studies in cancer incidence, mortality, and expectancy (Bureau of Cancer Control)

2. Planned Extension of Research Program:

There is a large accumulation of statistical data in the Bureau of Cancer Control and at the Roswell Park Memorial Institute which requires treatment, analysis and evaluation. Steps should be taken to evaluate the magnitude of this problem and, if necessary, to enlarge the statistical staff to make these necessary studies.

Examples:

- a.** Epidemiological studies: (Objective to study possible etiological factors and groups exposed to increased risk of developing cancer, for application in promotion and case-finding).

- (1) Epidemiological study of major forms of cancer by investigation of sample of reported cases.
 - (2) Study of cancer family in Allegany County.
 - (3) Study of relation between use of tobacco and cancer, utilizing records at Roswell Park Memorial Institute.
 - (4) Study of axillary node involvement of breast cancer causes at mastectomy to determine whether delay in treatment is decreasing.
- b.* Study of effectiveness of cell smears as a case-finding method (Division of Laboratories and Research and Bureau of Cancer Control, Roswell Park Memorial Institute, tumor clinics, and general hospitals).
 - c.* Occupational cancer study is being conducted at Roswell Park Memorial Institute by the Occupational Cancer Committee of New York State—a committee composed of members from the New York State Department of Labor, Industrial Hygiene Division of the United States Public Health Service; the Manufacturing Chemists Association; the American Petroleum Institute; the Medical Society of the State of New York; the Tumor Clinic Association for the State of New York and the New York State Department of Health.

An Occupational Cancer Manual has been developed and distributed to the physicians of New York State, tumor clinics, detection centers and the general hospitals.

3. Research Advisory Committee:

No such advisory group with respect to cancer research in this State exists at present. Such a group should include representatives of the following agencies and institutions:

- a.* University of Rochester School of Medicine
- b.* Albany Medical College
- c.* University of Buffalo School of Medicine
- d.* Syracuse University School of Medicine
- e.* New York State Department of Health
- f.* Roswell Park Memorial Institute
- g.* Division of Laboratories and Research
- h.* Bureau of Cancer Control

- i.* New York City Medical Schools
- j.* Sloan-Kettering Institute, New York City
- k.* New York City Department of Health
- l.* Rockefeller Institute, New York City
- m.* Medical Society of the State of New York
- n.* A representative from each of the following two organizations might be considered as suitable members for this committee: The New York State League of Nursing Education and the State Association of Medical Social Workers.

G. HEALTH EDUCATION:

1. Professional Education:

a. Cancer Teaching Days—one in each district of the Medical Society of the State of New York per year (in cooperation with State and County Medical and Dental Societies).

b. Distribution of Illinois Cancer Bulletin monthly to each physician in upstate area (in cooperation with the American Cancer Society and State Medical Society). This bulletin is being sent to all upstate physicians.

The issues of particular interest to the dentists are being distributed in a bulletin form to all upstate dentists by the New York State Division of the American Cancer Society and the Bureau of Cancer Control, New York State Department of Health in cooperation with the Dental Society of the State of New York.

c. Development of Department of Oncology in each medical school (in cooperation with the Public Health Service). Funds provided by the Public Health Service directly to medical schools.

d. Fellowships for refresher courses or training up to one year, for pathologists, radiologists, tumor clinic staff, detection center staff (supplemented by grants from the American Cancer Society).

e. Two weeks' institute for public health nurses at Roswell Park Memorial Institute.

f. Institutes for health officers with emphasis on case-finding and follow-up and public health education. Course to last one to two weeks and be given at Roswell Park Memorial Institute, Memorial Hospital, New York City and University of Rochester School of Medicine.

g. Two weeks' refresher courses for practicing physicians to be given at medical schools in New York City, Albany, Syracuse, Rochester and Buffalo.

2. Public Education:

a. Regional meetings of leaders of lay groups to carry "message" back to their groups.

b. Regional meetings of the local branches and the Field Army of the New York State Division of the American Cancer Society.

c. Organization of "cooperative cancer committees" in every county (57) such as, Westchester County Cancer Committee, Nassau County Cancer Committee and Suffolk County Cancer Committee, and organization of cooperative cancer sub-committees in every city of 10,000 population or over (70). Committees to include representatives of all adult lay groups and to plan for a lecture on cancer before each such group at least once a year.

d. Regional courses of lectures for science teachers of high schools for instruction in educational material which may be incorporated into high school science courses.

e. Teachers colleges and universities—incorporation of information regarding cancer in science, biology and hygiene courses.

f. Special effort in public education to reach

- (1) Labor groups, especially industrial workers (skin, lip, mouth, esophagus and stomach cancer).
- (2) Low income groups (skin, lip, mouth, esophagus, stomach, and uterine cancer).
- (3) Farmers (skin cancer).
- (4) Foreign language groups.
- (5) Families with apparent increased predisposition.

g. Preparation of material for use by physicians in teaching to lay groups. "Outline of Cancer Talk" gives suggested content of public cancer lecture, supplying of film strip, lantern slides, sound movies and exhibit material.

3. Cooperation with Other Agencies in Cancer Education:

All of the above programs and plans to be discussed with Education Committee of the New York State Division of the American

Cancer Society and Cancer Sub-committee of the Medical Society of the State of New York with regard to their statewide aspects on regional and county level, plans to be discussed and cleared with joint committee to include representatives of county medical societies, local health department, regional health officer, district health officer and, where lay education is concerned, county branch of American Cancer Society.

H. COOPERATION WITH OTHER AGENCIES AND GROUPS

1. Statewide:

a. Medical Society of the State of New York, Committee on Public Health and Post-graduate Education, Sub-committee on Cancer, and representatives of the Bureau of Cancer Control, meet regularly. This Committee issues annually a Course Outline Book, listing the speakers and subjects for all phases of post-graduate education. The Sub-committee on Cancer advises in regard to the establishment of tumor clinics, detection centers and the organization of Cancer Teaching Days. This Committee further advises in regard to needed changes and new methods to be employed by the Bureau of Cancer Control.

b. American Cancer Society—New York State Division
Executive Committee
Service and Medical Advisory Committee
Education Committee

c. Tumor Clinic Association of the State of New York

d. Medical Schools—The four medical schools in upstate New York are of primary importance in post-graduate education and in many phases of research. Members of the Department cooperating with each of these schools in the establishment of Departments of Oncology. Lectures are given by the members of the Department to the medical students in each of these schools.

2. County and Local:

a. Westchester Cancer Committee—Chairman is also chairman of Sub-committee on Cancer of State Medical Society and member of Education Committee of American Cancer Society, New York State Division.

- b. Nassau County Cancer Committee**
- c. Suffolk County Cancer Committee**
- d. County Branches of American Cancer Society in twelve counties**

e. Women's Field Army of American Cancer Society is organized in thirty-eight counties.

f. Tuberculosis and Health Association is the lay organization which has assumed responsibility for cancer program in Onondaga and Broome Counties.

g. County Medical Societies—Cancer committees appointed in fifty-three counties. These committees have given valuable aid to members of the Department, especially to the district and local health officers. Through these committees speakers are made available for lay educational lectures. They approve all local cancer projects which are financed by funds of the New York State Division of the American Cancer Society.

h. County health departments: eleven

i. City health departments: eleven

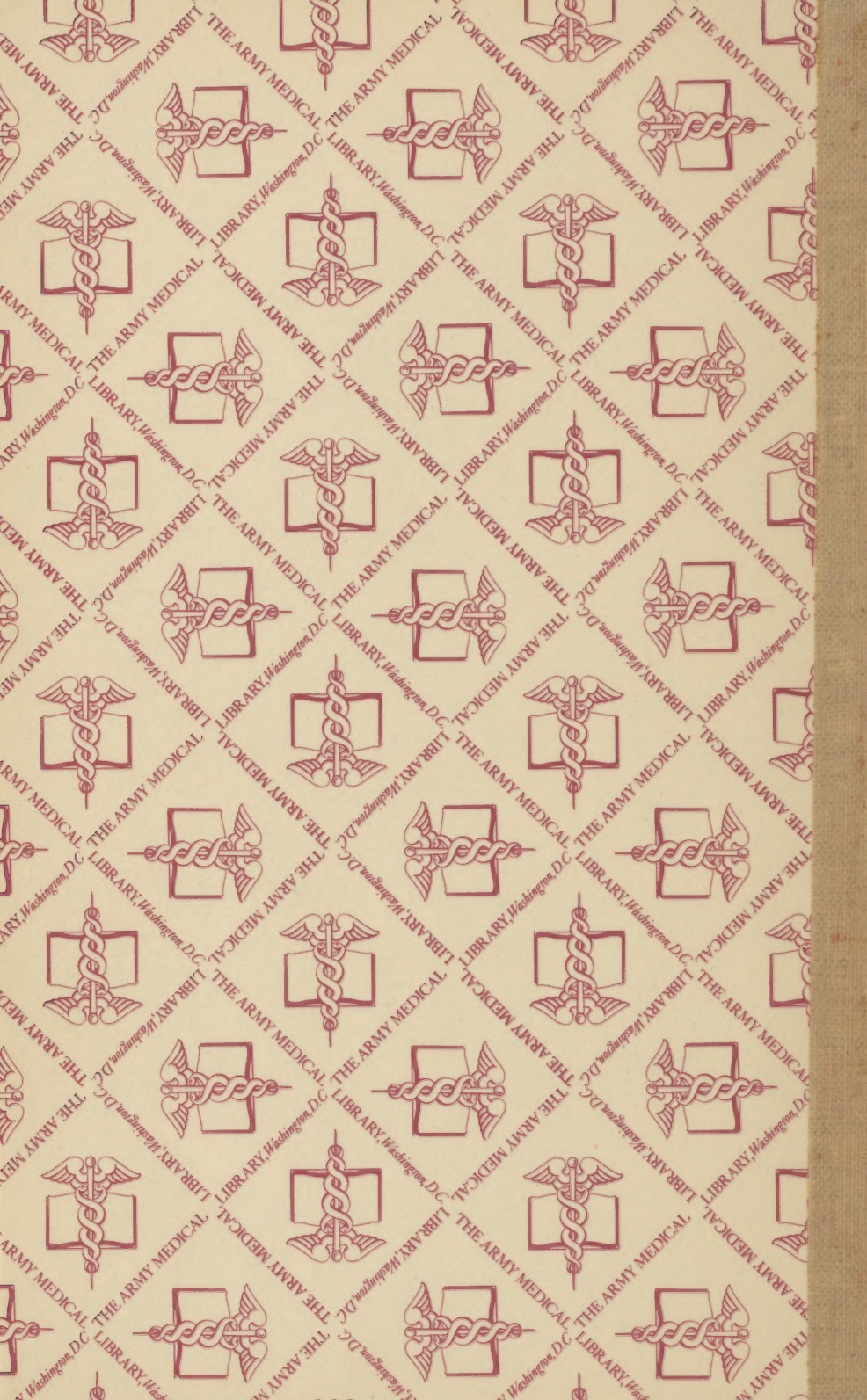
Coordination of above agencies to be improved by repeating in county and regional organizations the pattern already set at state level of having representatives of all agencies concerned meet to consider joint plans and combined attack by public and professional organizations.

I. CONTINUOUS EVALUATION OF PROGRAM:

1. Periodic review of this Plan will be made and revisions made at least annually on the basis of its adequacy for the three main objectives in cancer control: prevention, cure and care.

This review should be made by an Advisory Committee composed of representatives of the following agencies:

- a. Medical Society of the State of New York—Chairman of Cancer Committee.**
- b. New York State Division, American Cancer Society—Chairman of Executive Committee.**
- c. New York State Department of Health—Assistant Commissioner for Medical Services, Director of Cancer Control, and Director of Roswell Park Memorial Institute.**
- d. Tumor Clinic Association of the State of New York—President.**



**PRESSBOARD
PAMPHLET BINDER**



Manufactured by
GAYLORD BROS. Inc.
Syosset, N. Y.
Stockton, Calif.

QZ 200 N54c 1949

13010150R



NLM 05090694 7

NATIONAL LIBRARY OF MEDICINE